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In Re Application Of: David O. McGoveran
Serial No. 09/476,711
Filed: Dec. 30, 1999
For: A Declarative Method

Examiner: Andre Boyce
Group Art Unit: 3623
Atty. Docket No: McG-003
Date: Oct. 26, 2004

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SIR: Transmitted herewith is a Response to the Office Action dated May 31, 2003 and mailed 06/10/03 for the above application.

Small entity status for this application under 37 CFR §1.9 and 1.27 has been established by a verified statement previously submitted.

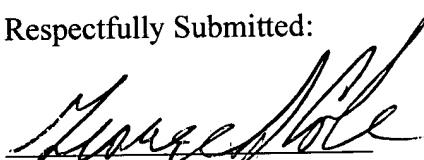
Extension of time as necessary is requested and a payment for the required fee is enclosed.

The Commissioner is herewith authorized to charge payment of any necessary fees, or credit any overpayment, to Deposit Account 50-0705 associated with this communication for any related purpose, including: (A DUPLICATE COPY OF THIS SHEET IS ENCLOSED)

Any additional filing fees required for presentation of extra claims

Any extension or petition fees.

Respectfully Submitted:



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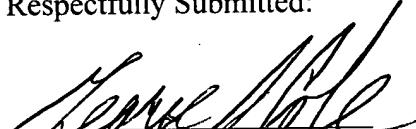
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Cancellation of Claims

The Examiner requested that claims 1-15 be cancelled. Applicant, in responding to Examiner's objection to 'new matter', to simplify continued prosecution, cancels all prior claims 1-30, and amends to add new claims 31-111, as indicated in the attached Claims Listing.

Cancellation of 'New Matter'

The Examiner alleged that the applicant's revised specification included 'new matter'. Applicant, respectfully disagreeing, nevertheless has re-examined all of Examiner's prior Office Actions, and in preference to appeal to the Board, withdraws his amendment and substitute specification (filed March 13, 2003) and request the examination of the new claims continue under the original specification. Applicant respectfully requests, however, that the clerical corrections of spelling errors, line spacing (from single space to space-and-a-half), and of a single mis-typed preposition (on page 17, line 11, first word; replacing "or" with "to", so the sentence properly reads, "Subordinate rule sets inherit conditions as constraints, and actions as goals, and responses ~~or~~ to actions as conditions") be carried forward and incorporated in the specification.

A copy of the specification, with the proper line spacing, spelling corrections, and corrected preposition, and with page and line numbers, is enclosed to assist the Examiner.

Claim Rejections — 35 USC §112:

As Applicant has removed the objected-to claims, and the language objected to by Examiner (“dynamically managing a process”; “a dynamically adaptable device”; “a method for inducing a business process from a set of defined conditions”), Applicant believes he has responded to Examiner’s Action.

In light of prior objections and actions, specific care was taken to assure proper antecedent basis for all material in the newly-submitted claims. The primary reason for the increase in the number of claims was Applicant’s effort to respond to the Examiner’s objection that the Applicant had failed “to particularly point out and distinctly claim the subject matter”.

Claim Rejections — 35 USC §101

The Examiner rejected all claims 16-30 for failing to meet the requirements of 35 USC §101, specifically asserting two grounds: “For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts”; and, “the claimed invention must produce a useful, concrete, and tangible result”.

Both tests are met by the Applicant’s invention, although the latter is the operative one; as there is neither constitutional nor statutory authority for the imposition of any ‘technological arts’ test. “Useful” is the word used in the Constitution, and a ‘useful’ method may be applied to more than one technology – for example, an assembly line method of manufacturing can be applied to automobiles, computer chips, motors, radios, toys, or xylophones. The assembly line method itself is not tied to any one of these ‘technologies’, nor are they all equally useful; yet few would argue that the assembly line, because it cannot be limited to a single technology (in Henry Ford’s case the automobile) does not qualify as a ‘technological art’.

Similarly, the Inventor's Zero Management process can be tied to businesses producing anything from artificial hearts to consumer electronic goods to ready-to-assemble furniture to software. It can enable a business to record and transmit its knowledge about how to best operate in a rapidly-changing world, and adapt to rapidly-changing technology. The spread of 'silicon foundries' and 'wafer-fabs', factories-for-hire, show that any process which allows a business to adapt to the dynamically shifting world has real, tangible, money-in-the-bank usefulness – and as that is one of the advantages of the invention, the Inventor has promoted a 'useful' art.

The test is not, as the Examiner suggests, whether a method can be performed 'using pencil and paper'. Any process, any method, in fact any software process, or any computer-based operation, can be reduced to 'pencil and paper' (or at least, word-processor and paper) *in principle*, as the "Turing Machine" definition of computability established. A process which changes information is patentable, as may "anything under the sun that is made by Man" Diamond. v. Chakrabarty, 447 US 303, 309 n.6 (1980). The Supreme Court stated that transformation of data alone is sufficient to meet both the above tests, in State Street Bank & Trust Group v. Signature Financial Group, Inc. 149 F.3d 1368, 47 USPQ 2d 1596 (Fed. Cir. 1998).

The 'Declarative Method For Business Management', that is, the method described in the Specification, does more than that minimum, transformation of data. The Examiner left out a critical step in his analysis; he forgot to consider the full meanings of what occurs when a rule's action is triggered. Such actions distinguish the method from a mere mental exercise; for the actions will, and do, change the world. For an Action is stated in the Definitions to include, first:

"An Action is defined to be a particular dynamic operation that will in turn create a new particular factual circumstance. An "Action" can be, for example, a business event (e.g. "Order new inventory"), a request to a human for information or for a decision ("Should we use supplier A or supplier B?"), a decision to set a new Goal ("Increase sales by a further 20%"), or a decision to set a new constraint

(“No expenses above \$5,000,000 may be authorized by anyone other than the president or treasurer”.)” (Specification, p. 16, lines 3-8.)

The very first example given is one showing that there is a change in the real world, namely, a business event of ordering new inventory. The fair meaning of this one statement goes beyond merely noting that an order should be issued, or printing an order for delivery, to delivering the order to the supplier and committing the business to the purchase.

Furthermore, an Action is also defined as something which can change the method itself; the definition continues to add:

“Additionally, an “Action” can also include creation, modification, or deletion of a Rule (for example, when an internal contradiction is found).” (Specification, p. 16, lines 8-10.)

Thus, that which can be transformed includes not just data, or the real world, but the operation of the method within a particular business, itself. Adaptive, or self-modifying, capabilities (Specification, p. 22, lines 24-27), particularly those which can allow the self-resolution of internal contradictions (Specification, p. 19, line 18 to p. 20, line 2), or a meaningful and valuable response to altered truth values resulting from changes in the real world (Specification, p. 20, lines 6-15), each mark a significant advance in the ‘technological arts’. Applicant points out that neither Logic nor Mathematics, alone, have any way to deal with contradictions within their system that arise from inherently contradictory axioms. What raises Applicant’s invention above any asserted ‘mathematical’ limitation is, among other things, his specific inclusion and description of a way (with multiple alternative implementations) for dealing with such a limitation in a business’s operation.

The Examiner has asserted that this invention does not ‘apply, involve, use, or advance the technological arts’, but failed to address either of the above points. Contrary to his assertion that a decision to set a new goal is ‘clearly a mental exercise’, because that

assertion of a new goal changes the nature and behavior of the process, and thus the operation of the business, it goes far beyond a mere mental exercise and influences the real world results. As the USPTO debates shifting to an all-digital document approach, tens of thousands of individuals, and probably a few major paper-making firms, face very real, very immediate, and both physical and operational adaptations to a ‘mental exercise’. If Eastman Kodak decides to shift from film to digital photography, billions of dollars in chemical orders, tens of thousands of jobs in chemical film processing, hundreds of landfills, are all affected. Thus, contrary to the Examiner’s disparagement of setting a new goal as being merely ‘a mental exercise’, doing so in the context of Applicant’s invention has real world consequences.

There is a science to reasoning, decision-making, acting, and business operations, which is separate from that of implementing such on computers. The method disclosed in the inventor’s application creates, from uncoordinated, even disorganized, information contained in a number of different formats and sources, what even the Examiner described as a ‘roadmap’; and, just as a roadmap produces useful, tangible results for everyone from truckers engaged in a long-haul who need to find an alternative route when a bridge is out, to a sales organization attempting to resolve the eternal ‘traveling salesman optimization’, so does the Applicant’s invention. The usefulness is testified to directly and as being obvious to those with ordinary skill in the arts (Declarations of Professor Bidgoli and David O. McGoveran).

Contrary to the Examiner’s assertion, the method disclosed in the claims does produce a concrete, tangible, and useful result, that being a transformation of the self-knowledge of a business applying the method to its own operations, thereby transforming both its self knowledge, producing better means of operation, reducing its inefficiencies, as well as effecting actions which change the real world in immediate and direct response to conditions, all as a consequence of the method’s application. Furthermore, the Applicant’s invention clearly describes making this business knowledge recordable, reproducible, shareable, and saleable.

The concrete and tangible result from applying this process to any business operation is a new and improved ‘method of doing business’; and this is because the knowledge of the business operation is transformed to its advantage by applying the process disclosed in the invention. Even in the hypothetical case, *reductio ad absurdum*, of an already-perfect business, while applying the invention will not produce an improved method of operation, it will at least produce the self-knowledge that no improvement is feasible — with a consequent and subsequent reduction in expense in consultants and management review!

Finally, there are multiple, specific, separate tangible results produced by the Applicant’s invention, now more clearly enumerated in several specific claims and already mentioned in the Specification. Five of the many tangible results are: (1) the instantiation of a tangible, reproducible, transferable and thus saleable, model of a business’ knowledge (Specification, p. 13, lines 24-30; Claim 61); (2) instantiation (in a recorded form) of a tangible store of a business’ human employees’ knowledge of its operations that is capitalized, i.e. contained outside of the human employees’ minds (Specification p. 13, line 30 to p. 14, line 3; Claim 60); (3) the reduction of risk and thus decrease in operational loss and cost, both for operations (Specification, p. 23, lines 20-26) and for delegation (Specification, p. 23, line 27 to p. 24, line 2; Claims 50, 67; 70, 71, and 74-79); (4) making process information accessible and susceptible to comparison and improvement as it is both made explicit rather than implicit and tied to measurement (Specification, p. 19, lines 6-7; Claims 48, 55); and most particularly, (5) making contradiction contained within the process not a source of error requiring external corrective intervention, but a source for and means of auto-correction (Specification, p. 19, lines 18-25; Claims 86, 88-92), a solution which no prior business method nor computer software implementation nor methodology disclosed by Examiner or known to Applicant or Applicant’s witnesses, had ever seen before.

For the above reasons, the Examiner’s objection is traversed.

Claim Rejections under 35 USC §103:

The Examiner rejected Applicant's earlier claims under 35 USC §103(a) as being unpatentable over the prior art, specifically citing Davis et. al (The Information System Consultant's Handbook, Dec. 1998) and McDermid (Software Engineer's Reference Book, 1991) and asserting that the Applicant's invention fails to qualify for a patent on the grounds that it is "obvious".

1. Combination of these References to Establish Obviousness is Legally Unsupportable

With regard to the proposed combination of Davis and McDermid, it is settled and binding precedent that in order for prior-art references to be validly combined, and the combination then to be used in a prior-art §103 rejection, the references themselves (or some other prior art) must suggest that they be combined. Applicant re-asserts the legal citations to this point from prior Responses, including specifically In re Sernaker, 217 USPQ 1, 6 (CAFC 1983), Orthopedic Equipment Co. v. United States, 217 USPQ 193, 199 (CAFC 1983), Ex Parte Levengood, 28 USPQ 2d 1300 (PTOBA&I 1993), and In re Vaeck, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991). As Davis makes no invocation of McDermid's prior text, the Examiner's combining the two is not legally justified, for neither text contains any impetus suggesting a combination, thereby rendering any such combination unsupportable for lack of foundation.

The Examiner's sole justification for combining these references is stated in one clause: "Both Davis et. al and McDermid are concerned with information systems...." (Office Action, p. 8).

Applicant respectfully points out that not only is "information systems" a separate field entirely from the field of the invention, but also that Examiner has not submitted any support for his assertion that McDermid is in fact 'concerned' with that field, as opposed

to a separate and distinct discipline of “software engineering”. For McDermaid states in his Preface:

”The intention in planning the book was that the primary audience for the SERB would be practicing software engineers, or software project managers, who would look to the SERB as a source of information to help them with practical development problems. ... It was intended that the reference book would have, as a secondary audience, research workers, consultants, etc. who need a reference work to ‘get them started’ when studying a new technical field for the first time’ Thus part of the audience may be very knowledgeable in the general area of computer science and software engineering, but wish to gain a relatively deep understanding of some topic which is currently outside their domain of expertise.”

(Preface, p. v)

McDermaid, in explicitly stating the scope of his work, only included hardware “to the extent that it is necessary to help those engaged in producing embedded systems” (p. vi); and made no mention of “human” or “procedural” components, nor any mention of attempting to “provide the right data and information to the right person at the right time”. Yet these are specifically (and repeatedly) used by Davis to define what an “information system” is. Davis’s book (it title points out it is for consultants on Information Systems) defines his subject matter, an Information System, thusly: “A set of hardware, software, data, human, and procedural components intended to provide the right data and information to the right person at the right time.” (Davis, Ch. 1, “The systems development life cycle”, p. 8; repeated at Ch. 72, “General systems design principles”, p. 583). The only overlap between Davis and McDermaid is that both speak about ‘software’ at some point. And while McDermaid is addressing software engineering, Davis is addressing “systems analysis and design methodologies” (Davis, Chapter 1, p. 3, Section 1.1, “Purpose”, 1st paragraph, last sentence.) If Davis (the later-written text) makes any mention of McDermaid, the Examiner has yet to submit such, and Applicant is unaware of any.

The Examiner has not cited any ground out of the text, or evidence on the record, or authority or source deriving from himself or the Patent Office, for either his assertion that these two texts are in the same field or for his combining them. Respectfully, Applicant asserts that no such combination may be used unless and until Examiner provides, in accordance with MPEP §2143.01, authority and proof from the references (that is, from within Davis) of the motivation and desirability to combine with McDermid, as required by In re Mills, 916 F.2d 680, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990), for as that court stated:

“The mere fact that the prior art could be modified would not have made the modification obvious unless the prior suggested the desirability of the modification.” (quoting to In re Gordon, 733 F.2d 900, 902; 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Thus Applicant submits that the rejection on any combination of these references on the grounds of obviousness is also improper and that any rejection of the claims based thereupon is traversed.

2. Davis Does Not Anticipate Nor Make ‘Obvious’ Applicant’s Invention

Applicant had responded to a prior Office Action wherein Examiner had asserted that Davis barred Applicant’s invention – and had thought that that grounds had been completely dealt with, as Examiner had dropped that grounds for objection. Even though dropping the earlier claims renders Examiner’s citations to Davis in the Office Action moot, Applicant in the following paragraphs wishes to set forth considerations and questions which the Examiner must be able to controvert before re-asserting that Davis either anticipates or makes obvious Applicant’s invention.

First, since Davis limits all feedback and self-modifying capability to less than the entirety of any information system, where does Davis disclose any method for modifying the fundamental goals and objectives of a business? For example, in Figure 7.2, Davis

explicitly does not complete his modification loop to the top level which includes, explicitly stated, ‘problems, resources, goals’. Yet Applicant’s invention, in both the original specification and the new claims, allows precisely that higher level of feedback (Specification, p. 22, lines 9-12: “feedback is internalized, and becomes linked with, rather than disparate from, operations, as the processes for creation, deletion, modification, and correction of both objectives and means (or goals, constraints, conditions, and actions) are declared as explicit consequences of rules governing the business....”).

Where does Davis disclose any self-modifying capability, which is a significant feature of Applicant’s invention, and is specifically disclosed? (Specification, p. 22, lines 24-27: “In the preferred embodiment, modification of a goal is done by creating a condition that when detected by the same level as a goal causes that level to modify its own rules (self-modifying), rather than requiring intervention of a higher level of the hierarchy.”)

Where does Davis, either in Figure 7.2 or any text, link the source of any iteration (for modifying the information system) loop signaled by an arrow with any condition that triggers an action, as Applicant’s invention specifically does? (Specification, at p. 22, lines 10-12: “as the processes for creation, deletion, modification, and correction of both objectives and means (or goals, constraints, conditions, and actions) are declared as explicit consequences of rules governing the business.”) As the Examiner will recall, in Applicant’s invention, a “Rule” is explicitly defined as a pairing of a condition and an action (Specification, p. 15, line 18).

Where does Applicant’s invention specifically require human-applied modification by expert system analysts and/or designers, as is required by Davis (Ch. 7, p. 51, 2d para: “In addition to...the expert system analysts and/or designers also identify the system’s goals and objectives...”)? How can this anticipate or render obvious, since it teaches away from, Applicant’s invention, which specifically incorporates and teaches automated, human-free modification even when a contradiction is encountered?

(Specification, p. 11, line 31 to p. 12, line 5 and line 18, and Figure 3; p. 15, lines 5-8; p. 20, lines 9-10; p. 21, lines 6-11; p. 23, lines 9-12.)

Since Davis differentiates between a “methodology” (Davis, Chapter 1, Section 1.4.3, p. 6, entire paragraph) and a “process” (Davis, Chapter 1, Definitions, p. 9), and imputes to a methodology a specific purpose (Davis, Chapter 1, Section 1.1, 1st sentence, p. 3) which he does not to a process, how do you assert that Davis is teaching a method (let alone any method remotely comparable to Applicant’s), as opposed to the system development life cycle methodology which Davis specifically is teaching in his work?

Where the Examiner asserts that Davis discloses a method that either anticipates or renders obvious Applicant’s invention, to what extent is the Examiner mingling two distinct concepts: (1) of a methodology for creating an expert system, and (2) of an expert system created by such a methodology? Yet if the Examiner is not confusing the two, how can Figure 7.2 (cited by Examiner), which Davis explicitly describes as “a typical expert systems analysis and design methodology” (Davis, Chapter 7, Section 7.4.2, p. 50), anticipate or render obvious Applicant’s “Declarative Method for Business Management”? Isn’t that mixing apple trees and apples? Or production line and product?

Where does Applicant’s invention require that the user “identify data by type”, as Davis specifically requires, in Figure 7.2 (third box, ‘Formalization Phase’)?

Where does Applicant’s invention require the definition of “the reports and other outputs the system must produce”, as Davis does (Davis, Chapter 7, Section 7.4.2.4, p. 52, 2nd sentence)?

Where does Applicant’s invention require the testing of results, as Davis requires (Davis, Chapter 7, Section 7.4.2.6), as contrasted with the testing of real world conditions (see definition of ‘Condition’ in Specification, p. 13, lines 24-26)?

Where does Davis disclose the use of inheriting down and passing up, or even what is to be inherited or passed between specific actors or elements, as Applicant does (Specification, p. 20, lines 4-10)?

Where does Davis disclose the capacity to use inconsistent rule sets, as Applicant does (Specification, p. 19, lines 1-3)?

Where does Davis disclose the capacity to cope with contradictions, as Applicant does (Specification, p. 19, lines 18-25)?

Where does Davis disclose (as does Applicant) stating external circumstances as being counterfactual, that is, other than they are, or specifically, as they are expected to be? (Specification, p. 13, line 18 and on to line 23)?

Where does Davis ever disclose stating elements in declarative rather than procedural form (Specification, p. 10, lines 23-29; p. 13, lines 16-20; p. 16, lines 14-15; p. 18, lines 15-16; and p. 22, lines 1-7)?

For each of the above, when asserting that Davis renders obvious Applicant's invention, please also specify exactly where in the prior art are to be found the key points which were held to be required in In re O'Farrell, 853 F.2d 894, 903, 7 USPQ 2d 1673, 1681 (Fed. Cir. 1988); namely: (a) the detailed enabling methodology; (b) the suggestion to modify the prior art to produce the claimed invention; and (c) evidence suggesting the modification would be successful.

In the absence of such a response, which would permit Applicant to respond in a meaningful fashion, any objection to Applicant's invention on the ground of obviousness on the works cited by Examiner in prior Responses is traversed.

3. Experts In The Field, Including the Author of the Reference Already Relied Upon By The Examiner, Refute the Examiner's Interpretation and Conclusions

Applicant has previously submitted, and requests official notice taken by the Examiner, of Exhibits A through G; comprising evidence, in the form of affidavits and declarations, expressly asserting that Applicant's invention was not anticipated by the prior art. inquiries.

Based on the evidence of the experts in the field, the Applicant's invention is non-obvious, and the Examiner's rejection on grounds of obviousness is traversed.

4. Examiner's Rejection For Obviousness Cannot Depend Upon An Impermissible "Obvious To Try" Standard

Applicant respectfully requests, in the event the claims are again rejected upon any combination of references for §103 grounds, that the Examiner include an explanation, in accordance with MPEP §706.02, Ex Parte Clapp, 27 USPQ 2d 972 (POBA 1985) and Ex Parte Levingood, *supra*, making plain the 'factual basis to support his conclusion that it would have been obvious' to make the combination; and specifically cite the language in the reference that names the particular procedure, method, and elements, and their combination, used by Applicant in his invention, as is required by In re Fine, *supra*, at 1598-1599:

"The PTO has the burden under section 103...It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available in the art would lead that individual to combine the relevant teachings of the references. [Citations omitted.] This it has not done. The Board points to nothing in the cited references, alone or in combination, teaching or suggesting Fine's invention...[as] neither of them offered any support for or explanation of this conclusion."

Applicant respectfully reminds the Examiner of three cautions expressed in the law in two particular cases concerning an assertion of ‘obviousness’. The first is found in Arkie Lures Inc. v. Gene Larew Tackle, Inc., 119 F.3d 953, 43 USPQ 2d 1294, 1296: “Good ideas may well appear ‘obvious’ after they have been disclosed, despite having been previously unrecognized.” That court also noted that when the prior art suggests one approach and the applicant goes directly against ‘the accepted wisdom’, this is evidence of non-obviousness. Arkie Lures, Inc., *supra*, p. 1297. The second is found in In re Fine, *supra*, at 1600: “One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

5. Examiner Implicitly Conceded The Non-Obviousness of Applicant's Invention

The Examiner repeatedly concedes that “Davis et al does not explicitly disclose delegating the objective to at least one specific actor, wherein each said specific actor inherits from all superior actors conditions as constraints and actions as goals, and passes upwards all actions as instantiations of conditions, and all information necessary for altering any objective when the objective does not conform to the real world” (Response, p. 8). The Examiner has also conceded that “Davis et al does not disclose the steps done in a declarative method suitable for reduction to a form of formal logic” (Response, p. 9).

As noted before, this invention must be evaluated as a whole, and not just as a combination of subordinate parts. That requirement is absolute, as the court stated with sharp depreciation in In re Markahur Patent Litigation, 831 F. Supp. 1354, 28 USPQ 2d 1801, 1817:: “This is much like testifying that because Shakespeare used only 26 letters, each of which had been used many times before, his plays are obvious.”

Second, the lack of any substantiation for Examiner’s assertions of ‘obviousness’ makes them highly suspect and amounts to an implicit concession by the Examiner that there are no real grounds for his rejection. This was shown when, for the prior Response, after Applicant went to the “horse’s mouth” for a reference wrongly applied by Examiner to this application and asked for a dispassionate evaluation by that author, the author stated both his grounds for and finding of novelty, non-obviousness, and usefulness of Applicant’s invention. The experts cited by Examiner have refuted him; that should be enough to require that future assertions be well-documented.

For all of the above reasons, the Examiner’s rejection on the grounds of obviousness is traversed.

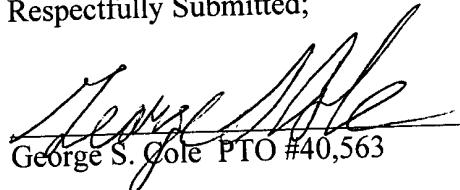
Conclusion

The Examiner's request that the "new matter" be dropped is accepted, and the Applicant returns to the original specification, with only clerical corrections.

To better conform to the same, the Applicant cancels all claims 1-30, and replaces them with new claims 31-111.

For all the reasons given above, it is respectfully submitted that the actual errors in the specification are corrected, that the claims comply with the requirements of Sections 101 and 112, that the claims define over the prior art a new and non-obvious combination over Sections 102 and 103, and that as the third party witnesses have already declared, these distinctions attain concrete, tangible, and useful results and are of patentable merit. Accordingly, this application is now submitted to be in full condition for allowance, which action is respectfully solicited.

Respectfully Submitted;



George S. Cole PTO #40,563



Itemization of Mailing

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I hereby certify that the following documents:

- Office Action (copy);
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- Response To Office Action;
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- Claims Tree;
- Claims Listing;
- Itemization of Contents Sent to PTO;
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Attn: Examiner Andre Boyce, Art Unit 3623
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Alexandria, VA 22313-1450.**

George S. Cole, Esq. PTO #40,563

DETAILED ACTION

Response to Amendment

1. This Non-final office action is in response to Applicant's amendment filed December 8, 2003. Claims 16-30 have been amended. Claims 1-15 are pending, since Applicant has not correctly canceled claims 1-15 (which remain rejected as seen in office action filed October 16, 2002). Withdrawing the claims is not appropriate. The claims should be **canceled**.

2. The previously pending objection to the claims for numbering has been withdrawn.
The previously pending rejections to claims 17, 21, 22, and 26-29 under 35 USC § 112, second paragraph have been withdrawn.

3. Applicant's arguments with respect to claims 16-30, under the prior art, have been considered but are moot in view of the new ground(s) of rejection. All other rejections that have been maintained include responses to Applicant's arguments.

New Matter Added to the Specification

4. The amendment (and substitute specification) filed March 14, 2003 (previously filed July 26, 2002) is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. With reference to the newly

submitted specification filed March 14, 2003, the added material which is not supported by the original disclosure is as follows: page 4, lines 3-8, page 4, lines 22-26, page 6, lines 1-28, page 7, lines 1-25, page 13, lines 19-22, page 17, lines 15-21, page 18, lines 16-28, page 19, lines 1-28, page 20 lines 1-14, page 29, line 28, page 30, lines 1-5, page 31, lines 22-28, and page 32, lines 1-10.

This rejection is maintained and the Examiner re-submits that in an attempt to clarify the concepts expressed in the original specification, Applicant has indeed added new matter. The Applicant asserts that the addition of the new matter is an attempt to provide additional background information. The Examiner disagrees and submits that the citations listed above all constitute new matter. As an example, page 13, lines 19-22 of Applicant's specification reads “[f]or each sub-process that transforms one or more inputs into one or more outputs, a capacity for dynamic use, alteration, non-use, or even removal is instantiated, so that the entire business process itself becomes a dynamic optimization of a set of transformational processes.” This is clearly new matter, since it was neither expressly nor inherently disclosed. Applicant's continued assertion that the new text is “provid[ing] additional background information” or that it was “inherent” based upon the original specification is not persuasive.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

6. Claims 16-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. *obviously*

Claim 16 recites "...dynamically managing a process through an emergent and inductive approach that anticipates possible conditions and desired actions...", which was added via the Applicant's amendment filed March 14, 2003 and was not described in the original specification, and is considered to be new matter. The Examiner submits that "dynamically managing a process" is not the same as "managing a dynamic process" (the claim language originally used by Applicant). Further, Applicant's assertion that the limitation was necessarily disclosed already as a function of the invention is not persuasive, nor supportable by the original specification. Moreover, Applicant's citations in the response do not match the original or amended specification reviewed by the Examiner. Claims 17-23 and 30 depend either directly or indirectly from claim 16, thereby containing the same new matter therein.

Claim 24 recites "...dynamically managing a process ...", which was added via the Applicant's amendment filed March 14, 2003 and was not described in the original specification, and is considered to be new matter. The Examiner submits that "dynamically managing a process" is not the same as "managing a dynamic

process" (the claim language originally used by Applicant). Claims 25 and 26 depend either directly or indirectly from claim 24, thereby containing the same new matter therein.

Claim 27 recites "...a dynamically adaptable device ...", which was added via the Applicant's amendment filed March 14, 2003 and was not described in the original specification, and is considered to be new matter.

Claim 28, which was added via Applicant's amendment filed March 14, 2003 recites "A method for inducing a business process from a set of defined conditions...". This portion of the claim was not described in the original specification and is considered to be new matter.

Claims 29-30 were added via Applicant's amendment filed March 14, 2003 and the limitations therein were not described in the original specification and are considered to be new matter. Here, it is clear that the claims constitute new matter by the simple fact that these claims mirror the new matter added in the specification (amendment filed March 14, 2003) on page 31, lines 22-28, and page 32, lines 1-10. The handwritten note "from declarative here inherent" is written to the right of the text. The Applicant's continued assertion that the limitations were suggested or inherent in the original specification is not persuasive.

7. Claims 19 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 19 and 23 are rendered vague and indefinite. If Applicant intends for the claims to be apparatus claims (i.e., computer program embodied on a general-purpose computer), then the claims need to be written as independent apparatus claims.

Claim 26 is rendered vague and indefinite. Claim 26 is an improper dependent claim since it "produc[es] a distinct new method." Further, "the steps used" lacks antecedent basis.

Claim Rejections - 35 USC § 101

8. Claims 16-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

First, for a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case the independent claims 16, 24, and 28 only recites an abstract

idea. The recited steps of declaring an objective, stating corresponding rules, testing each rule, *actuating a rule*, delegating, and internalizing feedback does not involve, use, or advance the technological arts, since the steps could be performed using pencil and paper. A decision to set a new goal (one of Applicant's examples of actuating a rule, seen in Applicant's amendment filed December 8, 2003) is clearly a mental exercise. Further, Applicant concedes in response filed March 14, 2003 that this "reasoning approach" does not require computer implementation.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention is merely a "reasoning paradigm", producing *no concrete and tangible result*. The steps of declaring, stating, testing, actuating, delegating, and internalizing, even when reduced to a form of logic do not produce a tangible result. It merely defines a theoretical approach/roadmap (i.e., paradigm) for a business to follow, hence no *tangible* result. Further, the result is not concrete, because the result is not assured or reproducible. *Computer & Technological*

Claim Rejections - 35 USC § 103

9. Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (The Information System Consultant's Handbook, December 1998), in view of McDermid (Software Engineer's Reference Book, 1991).

As per claim 16, Davis et al discloses a method for dynamically managing a process through an emergent and inductive approach that anticipates possible

conditions and desired actions (creating an expert system 7.4.2, page 50), comprising declaring an objective of the process as a set of measurable goals and constraints, stating for each objective at least one corresponding and applicable set of rules (identification and conceptualization phase, including identifying the problem resources and goals and diagramming the concepts and relations, figure 7.2), testing each rule against conditions both internal and external, as they exist in the real world, and actuating a rule when its condition is met (testing/evaluation phase of the results and prototype feasibility, figure 7.2). Davis et al does not explicitly disclose delegating the objective to at least one specific actor, wherein each said specific actor inherits from all superior actors conditions as constraints and actions as goals, and passes upwards all actions as instantiations of conditions, and all information necessary for altering any objective when the objective does not conform to the real world. McDermid discloses breaking the task down into sub-tasks and individual actions, so the user can clearly understand what needs to be done (13.6 Qualitative changes in skill). Further, learning is facilitated by consistency and upward transfer of tasks among superior and subordinate actors (page 13/11). Both Davis et al and McDermid are concerned with information systems, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include delegating the objective to at least one specific actor in Davis et al, as seen in McDermid, as an effective and employee specific distribution of objectives.

As per claims 17 and 21, Davis et al does not disclose the steps done in a declarative method suitable for reduction to a form of formal logic. However, McDermid discloses declarative knowledge consisting of facts and propositions, thereby suitable for reduction to logic (page 13/11). Both Davis et al and McDermid are concerned with information systems, therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the steps done in a declarative method suitable for reduction to a form of formal logic in Davis et al, as seen in McDermid for use in the expert system of Davis et al (figure 7.2), thereby improving implementation.

Claims 18-19 are rejected based upon the rejection of claim 16, since they are the method steps instantiated in a computer program and the general-purpose computer programmed to implement the method, respectively, corresponding to claim 16.

As per claims 20 and 25, Davis et al discloses internalizing feedback for both performance and process and incorporating into the method, steps for creating, differentiating, modifying, and deleting any objective, goal, constraint, set of rules or rule (refinement, reformatization, and redesign figure 7.2).

Claims 22-23 are rejected based upon the rejection of claim 20, since they are the method steps instantiated in a computer program and the general-purpose computer programmed to implement the method, respectively, corresponding to claim 20.

Claim 24 is rejected based upon the rejections of claims 16 and 20, since it contains the same limitations therein.

Claim 27 is rejected based upon the rejection of claim 24, since it is the device claim corresponding to the method claim.

As per claim 26, Davis et al disclose producing a new method lacking any logical contradiction (reformalization, including reformalizing any key concepts, sub-problems, and information flow, 7.4.2.3, page 51).

Claim 28 is rejected based upon the rejection of claim 24, since it contains the same limitations therein. Further, Davis et al discloses the method used in a business process (medical field, 7.2, page 48).

As per claim 29, Davis et al discloses creating and maintaining a dynamic and self-referential representation of the induced business process within the model, and changing the dynamic and the self-referential representation as and in accordance with each change in the set of defined conditions, constraints, rules, and elements comprising the model (i.e., inference engine that reaches a conclusion based upon available information and reasoning, 7.4.1, page 49).

As per claim 30, Davis et al disclose including at least one anticipatory defined condition, constraint, rule, or element (reconceptualization including redefining the system's key concepts, and objectives, 7.4.2.2, page 51).

Response to Arguments

10. With respect to the objections to new matter in the specification under 35 USC § 132 and rejections under 35 USC § 112 and § 101, the Examiner has incorporated responses to Applicant's arguments, after the associated rejection for purposes of clarity and efficiency. Further, the Examiner submits Davis et al (The Information System Consultant's Handbook, December 1998), in view of McDermid (Software Engineer's Reference Book, 1991) as disclosing Applicant's invention.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Tucker (The Computer Science and Engineering Handbook, 1997) discloses database performance measurement.

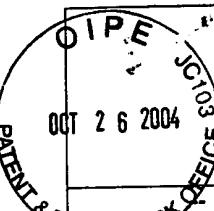
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (703) 305-1867. The examiner can normally be reached on 9:30-6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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adb

T. Hafiz
TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600



Office Action Summary

Application No.

09/476,711

Applicant(s)

MCGOVERAN, DAVID O.

Examiner

Andre Boyce

Art Unit

3623

The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
and for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 December 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

0125
OCT 26 2004
PATENT & TRADEMARK OFFICE
George S. Cole, Esq.
(650) 556-9510 TEL; (650) 556-9511 FAX

495 Seaport Court, Suite 101
Redwood City, CA 94063

Examiner Andre Boyce
Commissioner of Patents and Trademarks
Washington, D. C. 20231

Oct. 25th, 2004

Re: Patent Application for "A Declarative Method for Business Management"
Application SN 09/476,711
David O. McGoveran, Inventor

Dear Examiner Boyce:

The inventor and I have spent the past several months reviewing each of your Office Actions and the reworking the claims in response thereto. We began with a fresh review of your efforts, presuming that you were attempting to educate and work with, rather than oppose, us. We hope you find the present Response to be in that same spirit. Taken jointly, we believe the following four actions are responsive to the totality of your instructions and objections.

First, I apologize for being unable to understand the grounds for your objections regarding 'new matter' in the specification filed March 14, 2003, and described as an 'amendment (and substitute specification)'. After substantial re-evaluation and discussion, we accept your requirement that we return to the original specification. I trust that non-substantive changes correcting its errors of spacing, spelling, and a mistaken preposition will be acceptable, as they do not affect the submitted claims.

Second, we are submitting a new set of claims, entirely drawn to and using the language of the original specification. These claims are also drafted to address all of the objections raised in all prior Office Actions. The new claims begin with Claim 31 (the next number in sequence). We have spent months striving to make these claims more comprehensible, working, reworking, and reviewing them. Extra care was taken to prevent misnumbering, to assure proper antecedent references (both within the claims, and from each claim to the language of the original specification), and in their ordering.

Third, we are then canceling, per your request and in consequence of the new claims, all previous claims, from 1-30. As the latter half of these were objected to as including or depending upon 'new matter,' I trust you have no objection to this.

We have tried to lay out in logical, progressive, and detailed steps the novel, original, and useful features of the invention as described in the original specification, albeit in densely written form. A new writing tool was devised that let us establish claim progression and trace dependencies, and I apologize for adding to your workload by not having been as careful of the ordering in previous submissions. We anticipate these claims, although more numerous, to be far more readily understandable, traceable, and reviewable. Hopefully, the greater detail will aid you in more readily perceiving the complex whole of the invention as described in the original specification.

George S. Cole, Esq.
(650) 556-9510 TEL; (650) 556-9511 FAX

495 Seaport Court, Suite 101
Redwood City, CA 94063

In the hope that it will assist you, I am including a document which contains a summary reference for each new claim and shows their dependencies at a glance. It helped us greatly in drafting and correcting the claims, and should be of similar value to you in reviewing and comprehending the claims, both individually and in their combined structure.

Fourth and finally, I have included a Response to the most recent Office Action. I hope it addresses satisfactorily the issues raised therein and in all previous Office Actions. Although the most recent Office Action was speaking to different claims, I hope this Response – including the original specification and newly submitted claims – resolves several of those issues (particularly the perceptions of anticipation and of absence of any concrete and tangible result). I suspect our previous misperception and misreading of your prior Office Actions prevented us from replying to them adequately.

In recognition of your busy schedule, and anticipating more efficient progress and clearer communication, I am requesting a telephone interview at your earliest convenience and before your written, formal response. I wish to discuss at that time any issues you may have, which this Response may not have resolved, or that you believe would prevent this application from issuing. It is my earnest hope that we can move this application forward.

Sincerely:



George S. Cole, Esq.
PTO #40,563